IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)	**MAIL STOP AF**
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Tomohiro Yamaguchi et al.)	Group Art Unit: **2625**
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Application No.: 10/662,443)	Examiner: Quang N Vo
)	
Filing Date: September 16, 2003)	Confirmation No.: 9825
)	
Title: IMAGE PROCESSING)	
APPARATUS AND IMAGE)	
PROCESSING METHOD)	
)	
)	

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants respectfully request review and withdrawal of the final rejection of claims 1-25 as set forth in the final Office Action dated February 1, 2011. Claims 1, 6, 11 and 14 are independent. This Request is being filed with a Notice of Appeal.

I.   Rejections Under 35 U.S.C. § 103(a)

Claims 1-3, 6-8, 11-16, and 18-22 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ohuchi (U.S. Patent No. 5,025,481) in view of Saitoh et al. (U.S. Patent No. 6,272,248, hereinafter "Saitoh"). This rejection is legally and factually erroneous. The applied references do not disclose or suggest all the recited features of the claimed invention.

As illustrated in Figure 1, for example, an exemplary embodiment provides an image processing apparatus including a region determination unit 2, which includes a character determination unit 3 and a halftone-dot determination unit 4. As illustrated in Figure 2, for example, the halftone-dot determination unit 4 includes a dividing unit 40 for dividing image data into large blocks of a prescribed size and further subdividing the large blocks into multiple smaller blocks. For example, as described in paragraphs [0025]-[0026] on pages 9 and 10 of the specification and as illustrated in Figure 3, the dividing unit 40 divides the image data into large blocks

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having a size of M x N pixels, and further divides the large blocks into smaller blocks ① through ⑤ having a size of (i) x (j) pixels.

As illustrated in Figure 2, for example, the disclosed embodiment also includes a large block isolated point calculation unit 46 for calculating a number of isolated points contained in each large block established by the dividing unit 40. In addition, as illustrated in Figure 2, the disclosed embodiment also includes a small block isolated point calculation unit 41-45 for calculating a respective number of isolated points contained in each small block ① through ⑤ established by the dividing unit 40.

Furthermore, the disclosed embodiment includes a halftone-dot region determination unit 47-49 for determining whether or not a large block is a halftone-dot region. As described in paragraph [0031], the halftone-dot region determination unit 47-49 determines that a large block is a halftone-dot region if the following two conditions are satisfied: (1) all small blocks contained in the large block have an isolated point contained therein, based on the respective number of isolated points that are calculated for each of the small blocks, and (2) the number of isolated points calculated to be contained in the large block is greater than or equal to a first prescribed value (e.g., threshold value illustrated in Figure 2).

Accordingly, the disclosed embodiment provides that the halftone-dot region determination unit 47-49 makes two determinations. In a first determination, the halftone-dot region determination unit 47-49 determines whether *all* small blocks contained in the specified large block have an isolated point contained therein, based on the respective second numbers calculated by the small block isolated point calculation unit 41-45. In a second determination, the halftone-dot region determination unit 47-49 determines whether the number of isolated points contained in the large block is greater than or equal to a first prescribed value.

Therefore, the determination made by the halftone-dot region determination unit 47-49 will be false if at least one small block contained in the large block of interest does not have an isolated point contained therein, even if the second determination reveals that the number of isolated points contained in that large block is greater than or equal to the prescribed value.

Independent claims 1, 6, 11 and 14 recite various features of the above-described exemplary embodiments. Claims 1 and 6 each recite an image processing apparatus that comprises a halftone-dot region determination unit for determining whether or not a specified large block is a halftone-dot region.

Claim 1 recites that the halftone-dot region determination unit determines that a specified large block among the large blocks established by the dividing unit is a halftone-dot region (1) if **all** small blocks in the specified large block have an isolated point contained therein, based on the respective second numbers calculated by the small block isolated point calculation unit, and (2) if the first number of isolated points calculated to be contained in the specified large block by the large block isolated point calculation unit is greater than or equal to a first prescribed value. Claim 6 recites that the halftone-dot region determination unit determines that the large block is a halftone-dot region (1) if **all** small blocks in the large block have an isolated point contained therein, based on the respective first number of isolated points calculated by the small block calculation unit, and (2) if the second number of isolated points calculated to be contained in the large block by the large block isolated point calculation unit is greater than or equal to a first prescribed value. The methods of claims 11 and 14 recite steps corresponding to the constituent elements of the image processing apparatuses of claims 1 and 6, respectively.

Accordingly, claims 1, 6, 11 and 14 each comprise a halftone-dot region determination unit or determination steps which perform the following determinations:

(1) if **all** small blocks in the large block have an isolated point contained therein, and

(2) if the number of isolated points in the specified large block is greater than or equal to a first prescribed value,

to determine whether a large block containing the small blocks is a halftone-dot region.

As acknowledged by the Examiner, Ohuchi does not disclose or suggest the first determination (1) of claims 1, 6, 11 and 14. The Examiner applied Saitoh in an attempt to arrive at this feature of the claimed invention. However, the disclosure of Saitoh does not support this interpretation.

With reference to Figures 99 and 100, Saitoh discloses a halftone-dot region determination unit 15105 (see Figure 99) and halftone-dot region determination processing (step S15201) in embodiments in the disclosed Twelfth Aspect for detecting a special document such as paper money (see Column 109, line 39 *et seq.*). In the Twelfth Aspect, Saitoh discloses that in a region determined to comprise a halftone-dot region in a relevant original image, distances between peaks in density variations waves are measured. Then, it is determined whether the original image includes the special document such as paper money by determining whether inter-peak distances are constant.

The functions of the halftone-dot region determination process are disclosed in Figure 101 and Column 111, lines 23-60. In particular, Saitoh discloses that the determination of whether each block comprises the halftone-dot region includes the following process: "the relevant block is determined to comprise the halftone-dot region if one or more peak pixels exist in the block" (see Column 11, lines 59 and 60).

Accordingly, Saitoh discloses that the halftone-dot region determination is performed for each block among a plurality of blocks that are obtained in a block production processing step (see S15302). Therefore, in contrast to the claimed invention, Saitoh discloses an opposite technique in which <u>each block is separately processed, independent of one another, to determine whether each block individually contains a halftone-dot region</u>.

On the contrary, claims 1, 6, 11 and 14 recite the feature of determining that a specified large block containing small blocks is a halftone-dot region if *all* small <u>blocks in the large block have an isolated point contained therein</u>. In contrast to claims 1, 6, 11 and 14, Saitoh does not determine whether a large block containing small blocks is a halftone-dot region if <u>all blocks in the large block</u> have an isolated point therein. Instead, as discussed above, Saitoh discloses that <u>each block is separately processed to determine whether each block individually contains a halftone-dot region</u>.

Accordingly, similar to Ohuchi, Saitoh also does not disclose or suggest a halftone-dot region determination unit or determination steps which determine (1) if all small blocks in the large block have an isolated point contained therein, to

determine whether a large block containing the small blocks is a halftone-dot region, as recited in claims 1, 6, 11 and 14.

Furthermore, in addition to failing to disclose or suggest all the recited features of claims 1, 6, 11 and 14, Applicants respectfully submit that there is no reason or motivation in Ohuchi or Saitoh for achieving the combination of features (1) and (2), as recited in claims 1, 6, 11 and 14. On the contrary, Ohuchi discloses a technique of determining whether a specified block is a half-tone dot region by determining whether the specified block, as well as the blocks neighboring blocks, constitute a halftone-dot region. Similar to Ohuchi, Saitoh discloses a process of determining whether each block in a collection of blocks separately contains a halftone-dot region.

Therefore, in addition to failing to disclose or suggest all the recited features of claims 1, 6, 11 and 14, Applicants respectfully submit that neither Ohuchi nor Saitoh, whether considered individually or in combination, provide any reason or motivation to achieve the combination of features (1) and (2) for determining whether a large block containing small blocks is a halftone-dot region.

Accordingly, for at least the foregoing reasons, Applicants respectfully submit that claims 1, 6, 11 and 14 are patentable over Ohuchi and Saitoh.

Dependent claims 4, 5, 9, 10, 17 and 23-25 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ohuchi in view of Saitoh and further in view of Kingetsu et al. (U.S. 6,268,935, hereinafter "Kingetsu"). However, similar to Ohuchi and Saitoh, Kingetsu also does not disclose or suggest features (1) and (2) of claims 1, 6, 11 and 14. Consequently, Kingestu cannot cure the deficiencies of Ohuchi and Saitoh for failing to disclose or suggest all the recited features of the claimed invention.

II. Conclusion

For at least the foregoing reasons, as well as other reasons set forth in Applicants' prior response, the rejections contained in the final Office Action are factually and legally erroneous. Therefore, the final Office Action does not present a record that is appropriate for consideration by the Board of Appeals. Withdrawal of the final Office Action is respectfully submitted to be in order.

Respectfully submitted,

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